

ABSTRACT

WAVELENGTH DETERMINING APPARATUS AND METHOD

5

An apparatus for determining the wavelength of light emitted by, for example, a laser (10), includes three photodiodes (17, 18, 30). One photodiode (17) receives a proportion of the light redirected from the main optical path (16) by a beam splitter (13). A second photodiode (18)
10 receives a proportion of the light redirected from the main optical path (16) by the beam splitter (13) and passing through a broadband filter (21). A third photodiode (30) receives light that has been caused to interfere by an interferometric device (23). The interferometric device (23) is formed of a block having partially reflective surfaces so that part of the light is reflected
15 internally within the block and exits at the same place as it entered so as to interfere with light that was externally reflected by the block at that place. The ratio of the light intensities at the first and second photodiodes provide a coarse determination of wavelength, when compared to a look-up table, and the ratio of the light intensities at the first and third
20 photodiodes provide a more exact determination of the wavelength.

(FIG. 1)